

**Rodlike metallopolymers synthesised by
electropolymerisation**

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Electroactive polymers are of great interest due to their applications in, for instance, electrocatalysis, electronic devices, electrochromics, size-selective membranes, and solar energy conversion. Lately, much interest has been devoted to conducting organic polymers, and to materials consisting of a conjugated polymer linked to redox active metal centres. The conjugated backbones of the latter materials may serve to increase the electronic coupling between the metal centres and thus the electron transport rate through the polymer. Fundamental understanding of the factors governing charge transport in redox-active polymers requires a system which displays reversible electrochemical responses, with the possibility to systematically vary structural parameters such as the central metal ion and the distance between the metal-centres. Accordingly, a novel rodlike metallopolymer has been synthesised through oxidative electropolymerisation of substituted ruthenium terpyridine complexes in organic acidic medium. The metal centres of the polymers are linked by conjugated bridges. The polymers can be synthesised potentiostatically or potentiodynamically on platinum, vitreous carbon, and fluorine-doped tin-oxide surfaces. Charge transport and materials properties are currently under investigation in our laboratory and some preliminary results will be presented.